

## CLAIMS

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1. An information processing apparatus comprising:

a separation unit for separating the lyric information part and an accompaniment information part from the input information;

a processing unit for generating the first language letter information by speech recognition of the lyric information part separated by said separation unit, translating the generated first language letter information into the second language letter information of a language different from the first language letter information and generating the speech information using at least the second language letter information; and

a synthesis unit for synthesizing the speech information supplied from the processing unit and the accompaniment information separated by said separation unit to generate the synthesized information.

2. The information processing apparatus according to claim 1 wherein said processing unit includes a first processor for doing speech recognition of the lyric information part separated by said separation unit for generating the first language letter information and the second language letter information.

3. The information processing apparatus according to claim 2 wherein said first processing unit does speech recognition for each language contained in the lyric information part separated by the separation unit.

4. The information processing apparatus according to claim 3 wherein said second

processing unit includes a first language storage unit having stored therein plural word data or plural sentence data by a language for the first language letter information, and a second language storage unit having stored therein plural word data or plural sentence data by a language for the second language letter information, said first language storage unit having stored therein address data specifying an address of the second language storage unit having stored therein the word data or sentence data of the second language letter information associated with the word data or sentence data for the first language letter information stored in said first language storage unit.

5. The information processing apparatus according to claim 4 wherein said second processing unit reads out from the first language storage unit plural word data or sentence data closest to the combination of words speech-recognized by said first processing unit, along with the address data, to generate the first language letter information, said second processing unit reading out the word data or sentence data from the second language storage unit to generate said second language letter information.

6. The information processing apparatus according to claim 2 wherein said processing unit includes a speech synthesis unit for synthesizing the speech information using at least the second language letter information.

7. The information processing apparatus according to claim 6 wherein said speech synthesis unit synthesizes the speech information having characteristics of the lyric information part separated by said separation unit based on said lyric information part

and the second language letter information.

8. The information processing apparatus according to claim 7 wherein said speech synthesis unit includes an analysis unit for analyzing the lyric information part separated by said separation unit, a speech generating unit for generating speech data based on the second language letter information and a converter for converting the speech data from said speech generating unit based on the results of analysis by said analysis unit.

9. The information processing apparatus according to claim 1 further comprising:

a display unit for displaying the processing state by said processing unit.

10. The information processing apparatus according to claim 9 wherein said display unit displays at least the fact that the accompaniment information part has been read and the fact that said first and/or second language letter information has been generated.

11. The information processing apparatus according to claim 1 further comprising:


a storage unit for storing the accompaniment information separated by said separation unit, the first language letter information, the second language letter information and the synthesized information synthesized by said synthesis unit.

12. The information processing apparatus according to claim 1 further comprising:

a first device; and

a second device connected to said first device;

said first device having said separation unit and said second device having said



processing unit and the synthesis unit.

13. An information processing apparatus comprising:

a processing unit for doing speech recognition of a lyric information part inputted after separation from an accompaniment information part to generate the first language letter information, converting the generated first language letter information to the second language letter information of a language different from the first language letter information and generating the speech information using at least the converted second language letter information; and

a synthesis unit for synthesizing the speech information and the accompaniment information supplied from the processing unit to generate the synthesized information.

14. The information processing apparatus according to claim 13 wherein said processing unit includes a first processor and a second processor for generating the first language letter information and the second language letter information.

15. The information processing apparatus according to claim 14 wherein said first processor performs speech recognition processing for each word contained in said lyric information part.

16. The information processing apparatus according to claim 15 wherein said second processor includes a first language storage unit having stored therein plural word data or plural sentence data by a language for the first language letter information, and a second language storage unit having stored therein plural word data or plural sentence

data by a language for the second language letter information, said first language storage unit having stored therein address data specifying an address of the second language storage unit having stored therein the word data or sentence data of the second language letter information associated with the word data or sentence data for the first language letter information stored in said first language storage unit.

17. The information processing apparatus according to claim 16 wherein said second processor reads out from the first language storage unit plural word data or sentence data closest to the combination of words speech-recognized by said first processor, along with the address data, to generate the first language letter information, said second processor reading out the word data or sentence data from the second language storage unit to generate said second language letter information.

18. The information processing apparatus according to claim 14 wherein said processor includes a speech synthesis unit for synthesizing the speech information using at least the second language letter information.

19. The information processing apparatus according to claim 18 wherein said speech synthesis unit synthesizes the speech information having the characteristics of the lyric information part based on said lyric information part and the second language letter information.

20. The information processing apparatus according to claim 19 wherein said speech synthesis unit includes an analysis unit for analyzing said lyric information part, a speech generating unit for generating the speech data based on said second language

letter information and a conversion unit for converting the speech data from said speech generating unit based on the results of analysis by said analysis unit.

21. The information processing apparatus according to claim 21 further comprising:  
a display unit for displaying the processing state of said processing unit.

22. The information processing apparatus according to claim 21 wherein said display unit displays at least the fact that the accompaniment information part has been read and the fact that said first and/or second language letter information has been generated.

23. The information processing apparatus according to claim 13 further comprising:  
a storage unit for storing at least the accompaniment information, the first language letter information, the second language letter information and the synthesized information synthesized by said synthesis unit.

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A6* 24. An information processing method comprising:  
separating a lyric information part and an accompaniment information part from the input information;  
generating the first language letter information by speech recognition of the separated lyric information part;  
converting the generated first language letter information into the second language letter information of a language different from the first language letter information;  
generating the speech information using at least the converted second language

letter information; and

synthesizing the generated speech information and the separated accompaniment information to generate the synthesized information.

25. The information processing method according to claim 24 wherein the speech recognition in generating the first language letter information is performed in terms of a word contained in the separated lyric information part as a unit.

26. The information processing method according to claim 25 wherein plural word data or plural sentence data by a language corresponding to the first language letter information are stored in a first language storage unit;

plural word data or plural sentence data by a language corresponding to the second language letter information are stored in a second language storage unit; and wherein

in said first language storage unit, there is stored address data indicating the address of the second language storage unit in which is stored the word data or sentence data for the second language letter information corresponding to the word data or sentence data for the first language letter information stored in said first language storage unit;

in generating said first language letter information, plural word data or sentence data closest to the combination of speech-recognized words are read out from the first language storage unit along with the address data to generate the first language letter information; and wherein

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in generating the second language letter information, word data or sentence data is read out from the second language storage unit to generate the second language letter information based on the address data read out along with the word data or sentence data from the first language storage unit to generate said second language letter information.

27. The information processing method according to claim 24 wherein the synthesis of the speech information is performed by synthesizing the speech information having characteristics of the separated lyric information part based on the separated lyric information part and the second language letter information.

28. The information processing method according to claim 27 wherein the synthesis of the speech information is performed by analyzing the separated lyric information part, generating the speech data based on the second language letter information and converting the generated speech data based on the analyzed results.

29. The information processing method according to claim 24 wherein, in synthesizing the speech information, display is made for specifying the processing state.

30. The information processing method according to claim 29 wherein said display unit displays at least the fact that the accompaniment information part has been read and the fact that said first and/or second language letter information has been generated.

31. An information processing apparatus comprising:

an information storage unit having stored therein plural information; and



at least a signal processing unit connected to said information storage unit;

said signal processing unit including a separation unit for separating a lyric information part and an accompaniment information part from the information read out from the information storage unit; a processing unit for generating the first language letter information by speech recognition of the lyric information part separated by said separating unit, converting the generated first language letter information into the second language letter information of a language different from the first language letter information and for generating the speech information using at least the as-converted second language letter information; and a synthesis unit for synthesizing the speech information supplied from the processing unit and the accompaniment information separated by said separation unit to generate the synthesized information.

32. The information processing apparatus according to claim 31 wherein said processing unit includes a first processor for speech recognition of the lyric information part separated by said separation unit and a second processor for generating said first language letter information and the second language letter information.

33. The information processing apparatus according to claim 32 wherein said first processor performs speech recognition processing for each word contained in the lyric information separated by said separation unit.

34. The information processing apparatus according to claim 33 wherein said second

processor includes a first language storage unit having plural word data or plural sentence data by a language corresponding to the first language letter information, and a second language storage unit having plural word data or plural sentence data by a language corresponding to the second language letter information, and wherein

in said first language storage unit, there is stored address data indicating the address of the second language storage unit in which is stored the word data or sentence data for the second language letter information corresponding to the word data or sentence data for the first language letter information stored in said first language storage unit.

35. The information processing apparatus according to claim 34 wherein said second processor reads out plural word data or sentence data closest to the combination of speech-recognized words from the first language storage unit along with the address data to generate the first language letter information; and wherein

said second processor reads out word data or sentence data from the second language storage unit to generate the second language letter information based on the read-out address data read out from the second language storage unit to generate said second language letter information.

36. The information processing apparatus according to claim 32 wherein said processing unit includes a speech synthesis unit for synthesizing the speech information using at least the second language letter information.

37. The information processing apparatus according to claim 36 wherein said speech

synthesis unit synthesizes the speech information having characteristics of the lyric information part separated by said separation unit based on the lyric information part separated by said separation unit and the second language letter information.

38. The information processing apparatus according to claim 37 wherein said speech synthesis unit includes an analysis unit for analyzing the lyric information part separated by said separation unit, a speech generating unit for generating the speech data based on the second language letter information and a conversion unit for converting the speech data from the speech generating unit based on the results of analysis by said analysis unit.

39. The information processing apparatus according to claim 31 further comprising:  
a display unit for displaying the processing state by said processing unit.

40. The information processing apparatus according to claim 39 wherein said display unit displays at least the fact that the accompaniment information part has been read and the fact that said first and/or second language letter information has been generated.

41. The information processing apparatus according to claim 31 further comprising:  
a storage unit for storing the accompaniment information separated by said separation unit, the first language letter information, the second language letter information and the synthesized information synthesized by said synthesis unit.

42. The information processing apparatus according to claim 31 further comprising:  
a first device; and

a second device connected to said first device;

said first device having said separation unit and said second device having said processing unit and the synthesis unit.

43. The information processing apparatus according to claim 31 wherein said signal processing unit further includes

an actuating unit, and

a first sending/receiving unit for transmitting input data from said actuating unit and for receiving the information transmitted from the information storage unit; and wherein said information storage unit includes

a retrieving unit for retrieving the information coincident with the input data from plural information stored in said information storage unit based on input data transmitted from said transmitting unit, and

a second sending/receiving unit for receiving the input data for transmitting the results retrieved by said retrieving unit.

44. The information processing apparatus according to claim 31 wherein said information storage unit and said signal processing unit are interconnected over a communication network.

45. An information processing method comprising:

separating at least the speech information part from the input information;

generating the first language letter information by speech recognition of the separated speech information part;

converting the generated first language letter information into the second language letter information of a language different from the first language letter information; and

generating the speech information using at least the as-converted second language letter information.

46. The information processing method according to claim 45 wherein the speech information part and the accompaniment information part are separated from the input information and wherein the generated speech information is synthesized to the separated accompaniment information to generate the synthesized information.

47. The information processing method according to claim 46 wherein the speech recognition in the first language letter information is performed in terms of a word contained in the separated speech information part as a unit.

48. The information processing method according to claim 47 wherein plural word data or plural sentence data by a language corresponding to the first language letter information are stored in a first language storage unit;

plural word data or plural sentence data by a language corresponding to the second language letter information are stored in a second language storage unit; and wherein

in said first language storage unit, there is stored address data indicating the address of the second language storage unit in which is stored the word data or sentence data for the second language letter information corresponding to the word

data or sentence data for the first language letter information stored in said first language storage unit;

in generating said first language letter information, plural word data or sentence data closest to the combination of speech-recognized words are read out from the first language storage unit along with the address data to generate the first language letter information; and wherein

in generating the second language letter information, word data or sentence data is read out from the second language storage unit based on the address data read out along with the word data or sentence data from the first language storage unit to generate said second language letter information.

49. The information processing method according to claim 46 wherein the synthesis of the speech information is performed by synthesizing the speech information having characteristics of the separated speech information part based on the separated lyric information part and the second language letter information.

50. The information processing method according to claim 49 wherein the synthesis of the speech information is performed by analyzing the separated speech information part, generating the speech data based on the second language letter information and converting the generated speech data based on the analyzed results.

51. The information processing method according to claim 46 wherein, in synthesizing the speech information, display is made for specifying the processing state.

52. The information processing method according to claim 51 wherein said display

unit displays at least the fact that the accompaniment information part has been read and the fact that said first and/or second language letter information has been generated.